

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 – 60 (Canceled)

61. (Previously presented) A communication device for communicating data over a power line having a voltage greater than one thousand volts, comprising:

a data signal impedance coupled to the power line;

a coupler comprising a first port and a second port wherein said first port is coupled to the power line on a first side of the data signal impedance and the second port of said coupler is coupled to the power line on the second side of the data signal impedance;

a modem communicatively coupled to said coupler;

a fiber optic transceiver communicatively coupled to said modem; and

a fiber optic cable communicatively coupled to said transceiver.

62. (Previously presented)) The device of claim 61, further comprising a router in communication with said modem.

63. (Currently amended) The device of claim 62, wherein said router ~~monitors~~ is configured to monitor usage data.

64. (Currently amended) A communication device for communicating data over a power line having a voltage greater than one thousand volts, comprising:

a capacitive coupler to be communicatively coupled to the power line;

a modem communicatively coupled to said coupler;
a fiber optic transceiver communicatively coupled to said modem; and
a fiber optic cable communicatively coupled to said transceiver and configured to be communicatively coupled to a remote transceiver and wherein the remote transceiver is not communicatively coupled to a power line.

65. (Previously presented) The device of claim 64, further comprising a router in communication with said modem.

66. (Currently amended) The device of claim 65, wherein said router ~~monitors~~ is configured to monitor usage data.

67. (Currently amended) A method of communicating data signals over a power line having a voltage greater than one thousand volts, comprising:
at a first location:

inductively coupling a first data signal from the power line;
demodulating the first data signal to provide first digital data;
modulating light with the first digital data to provide a second data signal; ~~and~~
transmitting the second data signal through a fiber optic cable to a remote transceiver, wherein the remote transceiver is not communicatively coupled to a power line;
receiving a third data signal via the fiber optic cable from the remote transceiver;
demodulating the third data signal to provide second digital data;

modulating a carrier signal with the second digital data to provide a fourth data signal; and
inductively coupling the fourth data signal to the power line.

68. (Canceled)

69. (Currently amended) The method of 68 67, comprising:

at a second location:

inductively coupling the fourth data signal from the power line; and
demodulating the fourth data signal to provide ~~a third~~ the second
digital data.

70. (Currently amended) A communication device for communicating over a power line carrying a power signal having a voltage greater than one thousand volts, comprising:

an inductive coupler to be communicatively coupled to the power line;
a modem communicatively coupled to said coupler; ~~and~~
a fiber optic transceiver communicatively coupled to said modem; and
a fiber optic cable communicatively coupled to said transceiver and configured to be communicatively coupled to a remote transceiver and wherein the remote transceiver is not communicatively coupled to a power line.

71. (Previously presented) The device of claim 70, wherein said inductive coupler is comprised of a magnetically permeable material having an aperture through which the power line may traverse.

72. (Previously presented) The device of claim 70, wherein said inductive coupler comprises a toroid.

73. (Currently amended) The device of claim ~~70~~ 72, wherein ~~the~~ said inductive coupler comprises a first portion coupled to a second portion via a hinge.

74. (Previously presented) The device of claim 70, further comprising a router in communication with said modem.

75. (Currently amended) The device of claim 74, wherein said router ~~monitors~~ is configured to monitor usage data.

76. (Previously presented) The device of claim 70, further comprising an inductive power coupler configured to inductively couple power from the power signal carried by the power line.

77. (Previously presented) The device of claim 76, wherein said power coupler is electrically connected to said modem to provide power thereto.

78. (Previously presented) The device of claim 77, wherein said power coupler is electrically connected to said transceiver to provide power thereto.

79. (Previously presented) The device of claim 78, wherein said power coupler is connected to said modem through an AC-DC converter.

80. (Currently amended) A method of communicating data signals over a power line having a voltage greater than one thousand volts, comprising:

receiving a first data signal from a fiber optic cable coupled to a remote transceiver and wherein the remote transceiver is not communicatively coupled to a power line;

demodulating the first data signal to provide first digital data;

modulating a carrier signal with the first digital data to provide a second data signal; and

inductively coupling the second data signal to the power line.

81. (Currently amended) A communication device for communicating over a power line carrying a power signal having a voltage greater than one thousand volts, comprising:

a data coupler to be communicatively coupled to the power line;

a modem communicatively coupled to said coupler configured to communicate over the power line; and

a power coupler configured to inductively couple power from the power signal carried by the power line, wherein power from said power coupler powers said modem; and

a fiber optic transceiver communicatively coupled to said modem.

82. (Canceled)

83. (Canceled)

84. (Previously presented) The device of claim 81, wherein said data coupler is an inductive coupler.

85. (Previously presented) The device of claim 81, wherein said data coupler is a capacitive coupler.

86. (Previously presented) The device of claim 81, wherein said power coupler is comprised of a magnetically permeable material having an aperture through which the power line may traverse.

87. (Currently amended) The device of 86, wherein said power coupler comprises a toroid.

88. (Currently amended) The device of claim 86, wherein ~~the~~ said power coupler further comprises a first portion coupled to a second portion via a hinge.

89. (Previously presented) The device of claim 81, further comprising a router in communication with said modem.

90. (Currently amended) The device of claim 89, wherein said router ~~monitors~~ is configured to monitor usage data.

91. (Currently amended) The device of claim ~~83~~ 81, further comprising a fiber optic cable communicatively coupled to said fiber optic transceiver and to a remote transceiver and wherein the remote transceiver is not communicatively coupled to a power line.

92. (New) The device of claim 61, wherein said modem is configured to communicate over the power line via a wideband signal.

93. (New) The device of claim 92, wherein said wideband signal comprises at least one carrier frequency of about fifty megahertz.

94. (New) The device of claim 92, wherein said wideband signal comprises an orthogonal frequency division multiplex (OFDM) signal.

95. (New) The device of claim 64, wherein said modem is configured to communicate over the power line via a wideband signal.

96. (New) The device of claim 95, wherein said wideband signal comprises at least one carrier frequency of about fifty megahertz.

97. (New) The device of claim 95, wherein said wideband signal comprises an OFDM signal.

98. (New) The method of claim 67, wherein the first data signal comprises a wideband signal.

99. (New) The method of claim 98, wherein said wideband signal comprises at least one carrier frequency of about fifty megahertz.

100. (New) The method of claim 98, wherein said wideband signal comprises an OFDM signal.

101. (New) The device of claim 70, wherein said modem is configured to communicate over the power line via a wideband signal.

102. (New) The device of claim 101, wherein said wideband signal comprises at least one carrier frequency of about fifty megahertz.

103. (New) The device of claim 101, wherein said wideband signal comprises an OFDM signal.

104. (New) The method of claim 80, wherein the second data signal comprises a wideband signal.

105. (New) The method of claim 104, wherein said wideband signal comprises at least one carrier frequency of about fifty megahertz.

106. (New) The method of claim 104, wherein said wideband signal comprises an OFDM signal.

107. (New) The device of claim 81, wherein said modem is configured to communicate over the power line via a wideband signal.

108. (New) The device of claim 107, wherein said wideband signal comprises at least one carrier frequency of about fifty megahertz.

109. (New) The device of claim 107, wherein said wideband signal comprises an OFDM signal.